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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/808,483	03/25/2004	Hironori Osuga	033036M073	5757
441 7590 04/16/2007 SMITH, GAMBRELL & RUSSELL 1850 M STREET, N.W., SUITE 800 WASHINGTON, DC 20036			EXAMINER SELLERS, ROBERT E	
			ART UNIT	PAPER NUMBER
			1712	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		04/16/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

# Office Action Summary

Application No.

10/808,483

Applicant(s)

OSUGA, HIRONORI

Examiner

Robert Sellers

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 26 February 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 2, 4 and 6 is/are pending in the application.
- 4a) Of the above claim(s) 4 and 6 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

This is responsive to the Request for Continued Examination, amendment and 37 CFR 1.132 declaration filed February 26, 2007.

Claims 4 and 6 are drawn to inventions nonelected with traverse in the response filed May 2, 2006. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144 and MPEP § 821.01).

1. The 35 U.S.C. 103(a) rejection over Fujimoto et al. Patent No. 5,049,596 in view of Shiobara et al. Patent No. 6,310,120 (Shiobara et al. '120); Shintai et al. Patent No. 5,362,775 and Shiobara et al. Patent No. 6,001,901 is withdrawn. Claim 2 limits the amount of spherical silica to from 85% to 95% by weight. Fujimoto et al. (col. 1, line 65 to col. 2, line 7) discloses a calculated proportion of inorganic powder (D) including alumina (col. 3, lines 26-29) of from 24.3% to 65.5% by weight significantly below the claimed parameters.

The text of section 103(a) of Title 35, U.S. Code not included in this action can be found in the non-Final rejection mailed August 22, 2006.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ichiroku et al. Patent No. 6,506,822 in view of Shiobara et al. '120 and Shintai et al.

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2. Ichiroku et al. reports an admixture of alumina and fused silica (col. 9, lines 59-64) in a concentration of from about 100 to 1000 parts by weight per 100 parts by weight of epoxy resin and curing agent (col. 10, lines 15-18). The claimed individual level of spherical alumina is not recited.

3. Shintai et al. teaches preferably at least 60% by weight of an inorganic filler such as spherical alumina (col. 11, lines 22-27 and 39-42) and exemplifies a calculated quantity of as high as 86.9% by weight (col. 13, Example 1, lines 17-26 and Table 3). It would have been obvious to employ the alumina of Ichiroku et al. at a concentration of at least 60% by weight encompassing the claimed range, or at an amount of 86.9% by weight within the claimed parameters shown in Shintai et al. in order to optimize the lowered expansion and high heat conduction (Shintai et al., col. 11, lines 22-24).

4. The declaration attempting to distinguish the claimed proportions of spherical alumina is inconclusive since any differences in the tested properties could also be a function of the widely divergent contents of o-cresol novolak epoxy resin and phenolic novolak resin employed in Examples 1-5 as reported in Table I on page 3. The amounts of o-cresol novolak epoxy resin and phenolic novolak resin have not been held constant to isolate the effect of the proportions of spherical alumina on the tested properties. Any results pertaining to a coefficient of thermal expansion and heat conduction are not unexpected since they are acknowledged in Shintai et al.

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This is a Request for Continued Examination. All claims are drawn to the same invention claimed in the earlier application and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered earlier in the prosecution. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action in this case (MPEP § 706.07(b)). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no, however, event will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Sellers whose telephone number is (571) 272-1093. The examiner can normally be reached on Monday to Friday from 9:30 to 6:00. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866) 217-9197 (toll-free).

rs  
4/12/2007



ROBERT E.L. SELLERS  
PRIMARY EXAMINER